



MISSION:

Protect and Restore
Puget Sound

A PROGRESS REPORT

Progress to Protect and Rest

Carved by glaciers, Puget Sound is a place where the saltwater of the ocean meets the freshwater flowing from 10,000 rivers and streams. Together, they form a complex, living system home to a magnificent array of fish, marine mammals, sea birds, marine invertebrates and plants. The riches of the Sound have played a leading role in the region's commercial and cultural life for as long as people have lived on its shores. Some four million people live and work in the Puget Sound region today.

Puget Sound was designated as an "Estuary of National Significance" by the U.S. Environmental Protection Agency in 1988 and made part of the National Estuary Program. The federal government and Washington State have both adopted the Puget Sound Water Quality Management Plan as the comprehensive plan to protect and restore Puget Sound. These actions underscore the Sound's significance and the need to protect, improve, and sustain its water quality, habitats and living resources.

The Puget Sound Action Team (Action Team), created in 1996, is the state's partnership for Puget Sound. The Action Team Partnership coordinates the state's environmental agenda for the Sound. The Action Team is made up of state agencies and federal, tribal and local governments.

Washington state's focused efforts to protect, restore and sustain Puget Sound date back to at least 1985, with the establishment of the Puget Sound Water Quality Authority (Authority). The Puget Sound Action Team succeeded the Authority in 1996. This Progress Report provides highlights of significant accomplishments of the Puget Sound Action Team, its predecessor agency, Action Team partner agencies and local governments.



Taylor Shellfish Farms

Restoring Shellfish Beds

The Action Team Partnership has organized concerted efforts by state and local agencies to identify and stop sources of pollution that harm shellfish beds.

- Since 1987, the Department of Health has lifted restrictions on harvesting shellfish in 17 growing areas because the water quality has improved.
- Since 1995, pollution control efforts by state agencies, local governments, tribes and industry groups have restored approximately 8,000 acres of commercial shellfish beds.
- Since 1995, Action Team partners have restored nearly two miles of recreational shellfish beaches and the Department of Health reopened these beaches for public harvest.

Cleaning Up Contaminated Sediments

Toxic chemicals discharged to the waters of Puget Sound often end up in the sediments lying on the Sound's floor, where they can continue to contaminate marine life. Between 1991 and 2001, the Action Team Partnership has worked to spur the clean up of more than 560 acres of contaminated sediments.

Significant cleanups include:

- More than 220 acres in Elliott Bay and the Duwamish
- More than 140 acres in Commencement Bay
- 77 acres in Eagle Harbor
- More than 40 acres in Sinclair Inlet and Rich Passage
- 40 acres in Port Gamble Bay
- 18 acres in Port Gardner

Cleanups have also occurred in Hood Canal, Bellingham Bay, Budd Inlet, Everett Harbor, and Lake Washington.



Cascade Pole Sediment Dredging Project in Olympia
Mohsen Kourehdar, Department of Ecology

Core Puget Sound



Preventing Sewage Pollution from Homes and Boats

Significant pollution enters Puget Sound from sewage systems in use in private residences and boats. The Action Team Partnership has helped develop state laws and rules to improve the use and maintenance of on-site sewage systems; provided funding to assess new on-site sewage treatment technologies; developed guidance for creating operation and maintenance programs by local health jurisdictions; and, supported homeowner education in the proper use and maintenance of septic systems. In 2001, the Action Team helped develop legislation that created the Shellfish On-Site Sewage Grants Program to provide funds to help homeowners repair failing systems.

- All 12 Puget Sound counties are developing or enhancing programs to ensure proper operation and maintenance of on-site sewage systems.
- Puget Sound boaters now have access to 58 sewage disposal facilities around the Sound, thanks to interagency efforts led by the Washington State Parks and Recreation Commission.
- The Department of Health is drafting changes to the state administrative code to further improve management of on-site sewage systems.
- The Department of Ecology is revising its biosolids code to improve environmental protection in areas where sewage pumped from septic tanks is applied to the land.

Septic redesign to help protect the quality of water.



Puget Sound Index

- Square miles of inland marine waters: 2,800
- Miles of shoreline: 2,500
- Percentage of shoreline with hard armoring: approximately 33
- Number of species of fish: 200
- Kinds of marine mammals: 26
- Number of species of sea birds: 100
- Number of species of marine invertebrates: Thousands
- Percentage of state's 6 million people that live near the Sound: almost 70

Marine Life in the Sound

- Percentage of decline of certain marine bird species in the past 20 years: 57 – 96
- Percentage decline of rockfish egg production from 1970 to 2000: approximately 90
- Number of resident orca whales in 1996: 97
- Number of resident orca whales in 2003: 82
- Number of commercial whale-watching boats: approximately 80
- Acres of contaminated sediment cleaned up between 1991 and 2001: more than 560
- Acres of sediment with levels of contamination that poison marine life: more than 5,000

Commerce on the Sound

- Average annual sales of Washington grown oysters, mussels and clams: more than \$100 million
- Pounds of clams and oysters harvested annually by recreational harvesters: nearly 2 million
- Percentage of Washington's recreational salmon caught in the Puget Sound basin: more than 50
- Second largest U.S. port (combined) for container traffic: Seattle/Tacoma
- Percentage of the state's 350 marinas located in Puget Sound: 80
- Percentage of the state's 39,400 moorage slips located in Puget Sound: 85
- Number of boats, sailboats and other watercraft owned by Washington residents in 2002, with majority located in Puget Sound region: 476,000
- Number of vehicles carried on ferries between July 1998 and June 1999: more than 11 million
- Number of people carried on ferries between July 1998 and June 1999: 26 million
- Percentage of statewide revenues from tourism and travel generated in Puget Sound region: nearly 80
- Percentage of statewide tourism-related jobs located in Puget Sound region: 75

Progress to Protect an

*Just one ship
against the rocks
could cause a lifetime
of damage. The
Neah Bay rescue
tug is critical
to protecting our
marine life.*



Neah Bay tug protects Puget Sound.
Department of Ecology

Preventing Oil Spills

The Department of Ecology has worked to permanently station a dedicated rescue tugboat at Neah Bay to prevent and respond to oil spills in the Strait of Juan de Fuca and Puget Sound.

- Since 1999, the tug has successfully responded to 19 vessels in distress.
- The tug provides timely emergency towing services for disabled vessels. It also assists vessels with propulsion and steering failures, fires and other problems.

Using Low Impact Development Techniques to Protect Water Quality

A very promising offshoot of work on stormwater has been the effort to promote low impact development, which uses the natural features of the land and a variety of techniques to mitigate the environmental impacts of development.

The Action Team Partnership has provided information and technical assistance to builders and developers, city and county planners, engineers, and others about how to develop land or redevelop property in ways that reduce the amount of stormwater runoff. The Action Team has provided training and information about low impact development to approximately 700 people around the Sound.



SeaStreets is a low impact development in Seattle.

Managing Stormwater

Stormwater that runs off the land rather than infiltrating into the ground is a major source of contaminants to Puget Sound. The Action Team Partnership has put a great deal of effort and resources towards improving how stormwater is managed. Important progress has been made.

- In western Washington, 89 percent of the most urban cities and 75 percent of the most urban counties require permanent stormwater controls for new development.
- Most urban western Washington cities and counties fund part or all of their stormwater programs through utilities.
- The Department of Ecology updated guidance for managing stormwater runoff and continues to develop permit programs for construction sites, industries and municipalities.
- The Department of Transportation is currently updating their stormwater management standards for highway projects.
- Action Team staff provided guidance to manage stormwater to all 125 Puget Sound jurisdictions and have met directly with staff from 55 of the cities and counties.



and Restore Puget Sound

Protecting and Restoring Habitat

Assuring high quality habitat is essential to protecting the plants and animals of Puget Sound. A good portion of the Sound's habitat has been degraded or eliminated by development and other land uses. A great deal of effort has been put into protecting remaining habitat and restoring degraded habitat.

- Local governments throughout Puget Sound have created programs to protect and enhance wetlands and they have incorporated those programs into Critical Areas Ordinances.
- In 1990, the Department of Fish and Wildlife (DFW), working with the University of Washington, established five marine research reserves. DFW also worked with the cities of Tacoma, Des Moines, Edmonds and Steilacoom to establish local conservation areas on the shoreline and has taken action to create seven additional marine reserves to protect rocky reef habitats.
- The Department of Natural Resources has established an aquatic reserves program to restrict commercial leasing on the bedlands

underlying the reserves and has recently recommended four sites for designation: Vashon/Maury Island (south Puget Sound), Cypress Island (San Juan islands), Fidalgo Bay (near Anacortes) and Cherry Point (near Bellingham).

- San Juan County has established eight bottomfish recovery zones in rocky reef habitats and has worked through its marine resource committee to educate residents about the need to protect bottomfish from over harvest.
- In 2001, a coalition of tribal, federal, state, and local governments, businesses and environmental organizations created the Puget Sound Nearshore Ecosystem Restoration Project. The project is dedicated to design and implement restoration projects in Puget Sound's 2,500 miles of nearshore ecosystem.
- Between 2001 and 2002, tribal, federal, state, and local governments and private organizations protected more than 8,000 acres and restored more than 1,700 acres of key nearshore habitat in Puget Sound.



Sargassum muticum, a non-native seaweed, threatens to disrupt the habitat of the San Juan Islands.

Reducing the Spread of Aquatic Nuisance Species

Aquatic nuisance species are species that are not native to Puget Sound and threaten the diversity and abundance of species that are native to the area. Action Team agencies, in partnership with local governments, have taken significant steps to prevent the introduction and spread of aquatic nuisance species in Puget Sound.

- Between 1997 and 2001, the Washington departments of Agriculture and Fish and Wildlife along with local noxious weed control boards reduced the infestation of *Spartina* in Puget Sound bays and estuaries by 27 percent, from 1,000 acres to 730 acres.
- DFW and the Washington State Patrol initiated a program to inspect the presence of aquatic nuisance species on vessels that enter Washington state on trailers.
- Since 1998, DFW has used volunteers to monitor the presence of European green crab at approximately 50 sites in Puget Sound. Participants have not found these invasive crabs in Puget Sound yet, although they are present in Willapa Bay and Grays Harbor.
- In 2001, DFW adopted rules to implement the state's ballast water management program. By 2004, the rules will require that vessels entering Puget Sound exchange ballast water offshore or treat it before discharging it.





Developing salmon eggs.
Steve Schroder photograph

Working in Watersheds

Watershed planning is central to the state's strategy for resource management and salmon recovery in Puget Sound. Action Team staff and Action Team agencies play key roles in these processes by funding, coordinating and providing technical assistance and education to local governments, tribes, interest groups and citizens who are solving problems cooperatively.

- All 12 counties have undertaken some form of watershed planning.
- Watershed plans are being used to restore salmon habitat and manage water supplies.

Progress to Protect an

*Washington citizens
should be proud of our
collective efforts to
protect Puget Sound.
Yet, we still have a great
deal to do. The Sound's
unparalleled resources
remain at risk.*

Tracking the Vital Signs of Puget Sound

Since 1988, scientists have measured trends in water quality, habitat and biological resources around the Sound, as part of the Puget Sound Ambient Monitoring Program. Monitoring includes: status and trends of submerged aquatic vegetation; distribution and densities of marine birds; contaminant levels in fish and sediments; changes in marine mammal populations; contamination in shellfish growing areas; changes to shorelines; and the quality of fresh and marine waters.

- The Puget Sound Action Team and its predecessor agency have reported on the health of Puget Sound through three State of the Sound reports, eight reports of the Puget Sound Ambient Monitoring Program and three Puget Sound's Health reports. The Action Team has tracked 17 environmental indicators of Puget Sound's health.
- Six Puget Sound research conferences have brought scientists, decision-makers, citizens and students together to discuss findings and learn about issues affecting the Sound. The Action Team has widely distributed proceedings of these conferences to provide quick access to much of the research available about Puget Sound.

www.psa

Involving People in Conservation

The Action Team has funded more than 300 projects to educate people and involve them in actions to enhance Puget Sound. Between 1987 and June 2003, the Public Involvement and Education fund provided nearly \$6 million to help communities educate more than two million people about Puget Sound and/or involve them in activities to protect and improve the health of the Sound.

Five field agents, from the Washington Sea Grant Program and the Washington State University Cooperative Extension Service, provide direct education to community groups, schools and business groups.

Students from Hood Canal School inventory bull trout in the Skokomish River.



d Restore Puget Sound

Collaborating in our Shared Waters

Action Team Partnership agencies work cooperatively with the Canadian and British Columbia governments to protect and improve the shared international waters of Puget Sound and Georgia Basin. Since 1992, the Action Team has participated in the Puget Sound/Georgia Basin International Task Force.

- The Task Force has sponsored several international workshops addressing monitoring, marine protected areas, invasive cord grasses, shellfish, and water quality.
- Working through the Task Force, Action Team staff have developed reports and recommendations on actions to address aquatic nuisance species, marine protected areas, nearshore habitat and protection, and comprehensive management of marine species. Action Team staff have incorporated the actions into the Puget Sound Water Quality Management Plan.

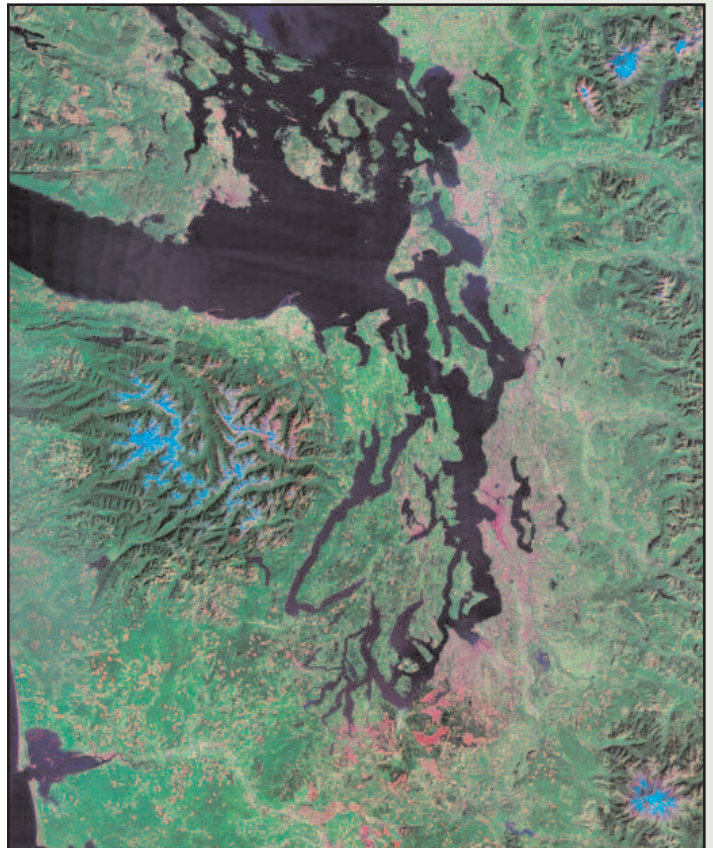


Image by SkyTruth

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Protect and Restore Puget Sound

Puget Sound Action Team Partners

The Puget Sound Action Team is the state's partnership for Puget Sound. The Action Team Partnership defines, coordinates, and puts into action the state's environmental and sustainability agenda for the Sound. Representatives from the following groups serve on the Action Team:

Local Government

City of Burien, representing Puget Sound cities
Whatcom County, representing Puget Sound counties

State Government, directors of the following agencies

Community, Trade, and Economic Development
Interagency Committee for Outdoor Recreation
Parks and Recreation Commission
Washington State Conservation Commission
Washington State Department of Agriculture
Washington State Department of Ecology
Washington State Department of Fish & Wildlife
Washington State Department of Health
Washington State Department of Natural Resources
Washington State Department of Transportation

Tribal Government

Tulalip Tribes, representing Puget Sound Tribes

Federal Government (Ex-officio)

NOAA Fisheries
U.S. Environmental Protection Agency
U.S. Fish and Wildlife

Chair: Director of Puget Sound Action Team

For more information:



PUGET SOUND
ACTION TEAM

Office of the Governor

www.psat.wa.gov or 800-54-SOUND

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Cover photo courtesy of Center for Whale Research and Taylor Shellfish Farms.